New Program Proposal
Master of Arts
Biology
The Citadel

Summary

The Citadel requests approval to offer a program leading to the Master of Arts degree in Biology, to be implemented in Fall 2005. This program will replace the program leading to the Master of Arts in Education degree in Biology, which was terminated Spring 2005.

The President and Provost of The Citadel approved the proposal on February 15, 2005. The proposal was submitted for Commission review on February 17, 2005. The proposal was reviewed and approved by the Advisory Committee on Academic Programs at its meeting on March 7, 2005. At that meeting, the College of Charleston representative expressed support for The Citadel's written and spoken assurance that The Citadel would support in the future the development of either a stand-alone Master of Science degree program (with thesis) at the College of Charleston or a cooperative single M.S. degree program in Biology with two tracks (one thesis, one non-thesis). Historically, however, it has been the position of the Commission for graduate programs at the two institutions' in the Charleston area to support only a collaborative program in which facilities, faculty, and library resources were shared between the College of Charleston and The Citadel.

As outlined in the proposal, the purpose of the program is to provide an opportunity for advanced study in biology for working professionals in the Charleston area who desire a non-thesis, terminal master's degree program in Biology. The program is consistent with that part of The Citadel's mission which describes it as an institution with certain degree programs to serve nontraditional student populations of the Lowcountry region desiring to further their education. Both the proposal and the statements of The Citadel's administration at the March 7, 2005, meeting affirm that the intent of the program is to provide a "terminal" master's degree, which is not meant for students who plan later to enroll in a Ph.D. program in biological sciences.

The proposed program replaces a similar program, the M.A. in Education in Biology, which was terminated in Spring 2005 and in which no new students have enrolled since Fall 2004. The reason for the discontinuation of the old program

and its replacement by the new is to serve the needs of an evolving population interested in this program. In researching student need, the institution has found that the in-service teacher population will benefit from this type of master's degree program in four ways: 1) gaining current and detailed content area knowledge; 2) adding training in experimental design and analysis of experimental data; 3) becoming exposed to different methods of science pedagogy to incorporate into their classroom settings; and 4) learning specific laboratory and field techniques that can be used in appropriate classroom settings. The M.A. in Education in Biology required a total of 33 credit hours, of which 24 had to be in biology and nine in education, behavioral science, and research methods.

The institution has also found that increasing numbers of students enrolling in the existing program are interested in careers related to biology, bio-technology, and bio-medical sciences, rather than in careers as biology teachers. These students have no need for the pedagogical courses in the M.A. in Education program in Biology. Instead, they are interested in competing for professional positions either at MUSC with its burgeoning biomedical research programs or in the growing applied-based, bio-technology sector of the Lowcountry's economy. For them, pursuit of a doctoral program in the field is not relevant to their career goals. Thus, the current proposal contains no thesis requirement.

The curriculum will consist of 32 credit hours, or eight graduate courses. At least five of the courses (20 credit hours) taken must be from graduate biology courses. In addition to the five required courses in biology, three additional courses (12 credit hours) must be taken in an "allied" area from biology, or other disciplines, including, but not limited to, education, chemistry, physics, geology, and psychology. The institution will add two new courses.

Two other graduate programs in *general* Biology are offered in South Carolina. These are programs at Winthrop and at USC-Columbia. Eight specialized masters degrees in biology are offered at five other public institutions of higher education in South Carolina. No private college or university in South Carolina offers a graduate degree in the biological sciences. The addition of this program does not constitute unnecessary duplication of effort because the other graduate programs of study in the biological sciences are serving other geographical regions of the state and different types of student interests. Of the two general biology masters degree programs, especially USC-Columbia is serving a traditionally-aged population of graduate students who hope to continue in many instances to complete a Ph.D. program. This is a very different type of student from what The Citadel is looking to serve with this proposed program.

A total of ten (2.73 FTE) faculty constitute the Biology faculty at The Citadel who will teach in the program. No new faculty members will be hired for

the program. Anticipated retirements of personnel in the next several years will be followed by replacement hirings to fill those vacated positions.

The College has purposefully constructed the program to attract students interested in research/applied biotech careers and those, as high school teachers, interested in a terminal masters in biology content. Enrollment in the proposed program is estimated to begin at ten students (5.13 FTE) in FY 2005-2006 and increase to 26 students (12.29 FTE) in FY 2009-2010. If enrollment projections are met, the program will meet the current CHE program productivity standards.

According to the program proposal, the program is not subject to any approval process (other than institutional and CHE approvals.) The program proposal also states that the program is not designed primarily for in-service teachers, as was the M.A. in Education program it is replacing. Therefore, the proposed program would not be a candidate for review by either the National Council for the Accreditation of Teacher Education (NCATE) or the National Science Teachers Association (NSTA.)

No institutional costs are shown in the proposal for this program, because they are not "new." The institution has confirmed that all resources to support this program for its implementation are already in place in support of the now-terminated M.A. in Education program. In addition, courses in the proposed new program are also offered in support of the M.A.T. program in Biology.

In summary, the proposed program will create a master's level program in biology suitable as a terminal degree for two groups of students: 1) in-service teachers wanting to use it for increased knowledge and skills of biology content; and 2) students from the Lowcountry area who wish to pursue a career in the region's emerging sectors in biomedical research and bio-technology applications. It will replace the existing, more pedagogically-directed M.A. in Education program in Biology, which was terminated in Spring 2005. The degree is not recommended for persons seeking to enter a Ph.D. program in the biological sciences.

Recommendation

The Committee on Academic Affairs and Licensing recommends that the Commission approve the program at The Citadel leading to the Master of Arts degree in Biology, to be implemented in Fall 2005, provided that:

- no "unique cost" or other special state funding be required or requested;
- should the College of Charleston wish to join in the delivery of this program as a joint program, it shall be allowed to do so with

submission of a program modification to the Commission, which shall include a memorandum of understanding between the two institutions; and

- the data file on the M.A. in Education program in Biology be closed in May 2006.